REMARKS

Claims 1, 2, 5-7, 9, 10, 13-15, and 24-26 were pending in the above-identified application when last examined and are amended as indicated above.

Claims 7 and 15 were rejected under 35 U.S.C. § 112, first paragraph as failing to comply with the enablement requirement. In response, claims 7 and 15 are amended. Claims 7 and 15 as amended are enabled in Applicants' specification, for example, by Figs. 9 and 10 and Applicants' original specification from page 35, line 5 to page 36, line 5. For the above reasons, Applicants request reconsideration and withdrawal of the rejection under 35 U.S.C. § 112, first paragraph.

Claims 7 and 15 were rejected under 35 U.S.C. § 112, second paragraph as being indefinite. The Office Action on page 3, lines 1-5 particularly indicated that claims 7 and 15 where unclear regarding comparing of actual and expected arrival times. Claims 7 and 15 are amended to remove the language that the Office Action cites in support of the rejection. In view of the above amendments, Applicants request reconsideration and withdrawal of the rejection under 35 U.S.C. § 112, second paragraph.

Claims 1, 2, 5, 6, 9, 10, 13, 14, and 24-26 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Pat. No. 5,402,256 (Spanke) in view of U.S. Pat. App. Pub. No. 2004/0114211 (Trepagnier). Applicants respectfully traverse the rejection.

Independent claim 1 patentably distinguishes over Spanke in view of Trepagnier at least by reciting, "an optoelectronic system coupled to the optical timing system such that the optoelectronic system generates an electronic timing signal based on propagation of the optical pulses through the optical timing system." Neither Spanke nor Trepagnier is directed to generating an electronic timing signal based on optical pulses.

Spanke is directed to moving a light pulse representing a data bit from one time slot to another. In a data network using time-division multiplexing, the time slot of each bit may define its output port at a switching node. Time-slot interchange may thus be used for switching. Trepagnier is directed to systems and methods for distribution of radiation among optical channels. Trepagnier particularly discloses distribution or switching of pulses from a time-division multiplexed optical signal into corresponding separate channels including

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respective non-linear optical elements. Spanke in view of Trepagnier does not disclose or suggest an optoelectronic system that "generates an electronic timing signal based on propagation of the optical pulses through the optical timing system" as required by claim 1.

The Office Action on page 3, line 16 particularly cites Spanke, Fig. 3 and optical time slot interchanger (OTSI) 30 as an optoelectronic timing system. However, claim 1 recites "an optoelectronic system … that … generates an electronic timing signal based on propagation of the optical pulses through the optical timing system." OTSI 30 of Spanke operates to move light pulses from one time slot to another and accordingly has an optical input and an optical output. Neither Spanke nor Trepagnier is directed to generating an electronic timing signal based on optical pulses.

Claim 1 further distinguishes over Spanke in view of Trepagnier by reciting, "an optical switching system coupled to direct one of the pulses from the semiconductor laser through the first optical waveguide or the second optical waveguide depending on when another of the optical pulses emerges from the optical timing system." Spanke discloses a system such as illustrated in Fig. 3 of Spanke in which an optical switch 32 directs an optical pulse to one of optical fibers 40_0 to 40_{n-2} and thereby changes the time slot of the emerging pulse. The optical fiber 40 selected depends on the target slot for that pulse, not when another pulse emerges. Spanke does not suggest that the selection or switching depends "on when another of the optical pulses emerges from the optical timing system" as required in claim 1. Trepagnier disclose synchronizing optical switching with laser pulsing, paragraph [0034] of Trepagnier, but does not suggest that switching depends "on when another of the optical pulses emerges from the optical timing system." Both Spanke and Trepagnier are concerned with the timing of time multiplexed signal or the pulsing of a source, but Spanke in view of Trepagnier do not suggest switching that is concerned with or depends on when prior pulse emerges from an optical timing system.

Claim 1 is thus patentable over Spanke in view of Trepagnier.

Claims 2, 5, 6, and 24-26 depend from claim 1 and are patentable over Spanke in view of Trepagnier for at least the same reasons that claim 1 is patentable over Spanke in view of Trepagnier.

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Independent claim 9 patentably distinguishes over Spanke in view of Trepagnier at least by reciting, "operating an optical switching system to direct one of the optical pulses from the semiconductor laser through the first optical waveguide or the second optical waveguide depending on when another of the optical pulses emerges from the optoelectronic

timing system." As noted above with reference to claim 1, Spanke and Trepagnier, which are concerned with time division multiplexed signals, fail to suggest selecting an optical path for an optical pulse based on when another pulse emerges because Spanke and Trepagnier assume fixed time periods or slots used in time division multiplexing. Accordingly, claim 9 is patentable over Spanke in view of Trepagnier.

Claims 10, 13, and 14 depend from claim 9 and are patentable for at least the same reasons that claim 9 is patentable.

For the above reasons, Applicants request reconsideration and withdrawal of the rejection under 35 U.S.C. § 103.

In summary, claims 1, 2, 5-7, 9, 10, 13-15, and 24-26 were pending in the application. This response amends claims 7, 13, and 15. For the above reasons, Applicants respectfully request allowance of the application including claims 1, 2, 5-7, 9, 10, 13-15, and 24-26.

Respectfully submitted,

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